



PATENT SPECIFICATION

DRAWINGS ATTACHED

939,324

Date of Application and Filing Complete Specification: June 27, 1941.

No. 23211/41.

Application made in France (No. 831,547) on July 4, 1940.

Complete Specification Published: Oct. 9, 1942.

© Crown Copyright 1942.

Index at acceptance:—Class 113, VD1, VE (114,383), VM111.

International Classification:—F06B.

COMPLETE SPECIFICATION

A Device for Controlling the Flow of Fluid in a Flexible Tube

WE, LES LABORATOIRES BERNARD & CO., a Company organized under the laws of France, of 17 rue de Berri, Paris, France, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

A device for controlling the flow of fluid in a flexible tube has already been proposed which consists of a pliable substantially non-rigid element which is adapted to be inserted over a length of the tube and which can be bent permanently so as to form in the tube an angle, the passage cross-section of which is more or reduced and adjustable according to the value of this angle.

This flexible and substantially non-rigid element is formed by a metal clip comprising a strip joined to a clamp which embraces the flexible tube.

In comparison with this device, the present invention provides a device for controlling the flow of fluid in a flexible tube by deforming the tube or a portion thereof into zig-zag or other configurations involving a plurality of bends, comprising a metal sheet formed with at least two apertures which is bent back upon itself and shaped to provide at least three spaced loops adapted to embrace the tube and the outer portions adapted to engage each other for subsequent bending at points between said loops along lines substantially at right angles to the axis of said loops.

Two devices according to the invention are shown by way of example in the accompanying drawings wherein:

Figure 1 is a perspective view of a first form of device having three loops.

Figure 2 is a perspective view of a second form of device having five loops.

Figures 3 and 4 are perspective views showing the fitting of a device to a tube.

In the embodiment shown the device is formed by a strip of flexible metal which is folded on itself.

Loops 3 extending with them 4 are provided in the folded-over part of the strip.

Three or more loops may be provided depending upon the required degree of deformation of the tube, three loops being shown in Fig. 1 and five in Fig. 2.

The outer portions 1 and 2 of the metal strip can readily be moved apart by pressure applied by the fingers of the user, for example, in order to enable the device to be fitted on the tube 5 as shown in Fig. 3.

Once the tube 5 has been placed in the loops 3 which are situated in line with one another, the two outer portions 1 and 2 are brought close together so as to fix the device on the tube.

The device is then folded zig-zag fashion so give the arrangement shown in Fig. 4.

The flow in the tube 5 is controlled by closing the device to varying degrees.

The advantages of this device include:

Some closure, even in the case of liquid under pressure.

No contact with metal parts when the "Z" is completely closed, and hence no danger of incomplete closure if the "Z" closure is made carelessly.

The invention is not limited to the above examples, in which modifications may be made without departing from the scope of the appended claims.

WHAT WE CLAIM IS:—

1. A device for controlling the flow of fluid in a flexible tube by deforming the tube as a portion thereof into zig-zag or other configurations involving a plurality of bends, comprising a metal sheet formed with at least two apertures which is bent back upon itself and shaped to provide at least three spaced loops adapted to embrace the tube and the outer portions adapted to engage each other for subsequent bending at points between said loops along lines substantially at right angles to the axis of said loops.

2. A device as set forth in claim 1, wherein the loops are situated in line with one another and readily allow the passage of the tube.

3. A device as set forth in claim 1 or 2, wherein the outer portions of the metal sheet are readily movable into and out of engagement simply by pressure with the fingers, thus enabling the device to be fitted on the tube.

4. A device for controlling the flow of fluid in a flexible tube substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

along lines substantially at right angles to the axis of said loops.

2. A device as set forth in claim 1, wherein the loops are situated in line with one another and readily allow the passage of the tube.

3. A device as set forth in claim 1 or 2, wherein the outer portions of the metal sheet are readily movable into and out of engagement simply by pressure with the fingers, thus enabling the device to be fitted on the tube.

4. A device for controlling the flow of fluid in a flexible tube substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

HIERON ROGERS & CO.,
Agents for Applicants,
Chartered Patent Agents,
Ridgway House, 111, Queen Victoria Street,
London, E.C.4.

London: Sent Printed by the Ministry's Stationery Office, by the Courier Press (London) Ltd.—1942. Published by The Patent Office, 25 Southampton Buildings, London, W.C.2, from which copies may be obtained.

939,324 COMPLETE SPECIFICATION

1 SHEET

This drawing is a reproduction of the Original as a reduced scale.

